

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-23. (Canceled)

24. (Previously amended) A method of enhancing lignification in a vascular plant, comprising introducing into the vascular plant an exogenous nucleic acid encoding an AGL1-like gene product comprising a MADS box, an I domain at least 95% identical to the I domain of SEQ ID NO:4, a K domain at least 92% identical to the K domain of SEQ ID NO:4 and a C domain at least 72% identical to the C domain of SEQ ID NO:4, whereby lignification is enhanced due to ectopic expression of said nucleic acid molecule.

25. (Previously amended) The method of claim 24, further comprising introducing an exogenous nucleic acid encoding an AGL5-like gene product comprising a MADS box, an I domain at least 95% identical to the I domain of SEQ ID NO:6, a K domain at least 92% identical to the K domain of SEQ ID NO:6 and a C domain at least 72% identical to the C domain of SEQ ID NO:6.

26. (Currently amended) The method of claim 24, wherein said AGL1-like gene product comprises ~~has~~ the amino acid sequence of Arabidopsis AGL1 (SEQ ID NO:4).

27. (Canceled)

28. (Currently amended) The method of claim 25, wherein said AGL5-like gene product comprises ~~has~~ the amino acid sequence of Arabidopsis AGL5 (SEQ ID NO: 6).

29. (Original) The method of claim 24, wherein said vascular plant is a woody plant.

30. (Canceled)

31. (Previously amended) The method of claim 24, wherein said exogenous nucleic acid molecule encoding an AGL1-like gene product is operatively linked to an exogenous regulatory element.

32. (Original) The method of claim 31, wherein said exogenous regulatory element is a constitutive regulatory element.

33. (Original) The method of claim 31, wherein said exogenous regulatory element is a tissue-selective regulatory element.

34. (Canceled)

35. (Original) The method of claim 33, wherein said tissue-selective regulatory element is a lignified tissue-selective regulatory element selected from the group consisting of a fiber-selective regulatory element, xylem-selective regulatory element and a tracheid selective regulatory element.

36-40. (Canceled)

41. (Previously amended) A transgenic vascular plant characterized by enhanced lignification, comprising an ectopically expressed nucleic acid molecule comprising a tissue-selective regulatory element operatively linked to an exogenous nucleic acid encoding an AGL1-like gene product comprising a MADS box, an I domain at least 95% identical to the I domain of SEQ ID NO:4, a K domain at least 92% identical to the K domain of SEQ ID NO:4 and a C domain at least 72% identical to the C domain of SEQ ID NO:4.

42. (Previously amended) The transgenic vascular plant of claim 41, further comprising introducing an exogenous nucleic acid encoding an AGL5-like gene product comprising a MADS box, an I domain at least 95% identical to the I domain of SEQ ID NO:6, a K domain at least 92% identical to the K domain of SEQ ID NO:6 and a C domain at least 72% identical to the C domain of SEQ ID NO:6.

43. (Currently amended) The transgenic vascular plant of claim 41, wherein said AGL1-like gene product comprises ~~has~~ the amino acid sequence of Arabidopsis AGL1 (SEQ ID NO:4).

44. (Canceled)

45. (Currently amended) The transgenic vascular plant of claim 42, wherein said AGL5-like gene product comprises ~~has~~ the amino acid sequence of Arabidopsis AGL5 (SEQ ID NO: 6).

46. (Previously amended) The transgenic vascular plant of claim 41, wherein said tissue-selective regulatory element is selected from the group consisting of a fiber-selective regulatory element, xylem-selective regulatory element and a tracheid selective regulatory element.

47. (Previously amended) A tissue derived from the transgenic vascular plant of claim 43, said transgenic vascular plant comprising an ectopically expressed nucleic acid molecule comprising a tissue-selective regulatory element operatively linked to a nucleic acid molecule encoding an AGL1-like gene product.

48-64. (Canceled)

65. (Previously added) The method of claim 25, wherein said exogenous nucleic acid molecule encoding an AGL1-like gene product is operatively linked to an exogenous regulatory element.

66. (Previously added) The method of claim 65, wherein said exogenous regulatory element is a constitutive regulatory element.

67. (Previously added) The method of claim 65, wherein said exogenous regulatory element is a tissue-selective regulatory element.

68. (Previously added) The method of claim 67, wherein said tissue-selective regulatory element is a lignified tissue-selective regulatory element selected from the group consisting of a fiber-selective regulatory element, xylem-selective regulatory element and a tracheid selective regulatory element.

69. (Previously added) The transgenic vascular plant of claim 42, wherein the exogenous nucleic acid encoding an AGL5-like product is operatively linked to a tissue-selective regulatory element.

70. (Previously added) The method of claim 24, wherein the AGL1-like gene product is ectopically expressed in the valve mesophyll and the valve mesophyll displays enhanced lignification compared to a plant in which the AGL1-like gene product is not ectopically expressed.

71. (Previously added) The transgenic vascular plant of claim 42, wherein the AGL1-like gene product is ectopically expressed in the valve mesophyll and the valve mesophyll displays enhanced lignification compared to a plant in which the AGL1-like gene product is not ectopically expressed.